

UNITED STATES DEPARTMENT OF AGRICULTURE
SCIENCE AND EDUCATION ADMINISTRATION

AGRICULTURAL RESEARCH
NORTHEASTERN REGION
BELTSVILLE AGRICULTURAL RESEARCH CENTER
BELTSVILLE, MARYLAND 20705

NOTES FROM THE DIRECTOR

No. 116

January 23, 1980

BELTSVILLE SYMPOSIA IN AGRICULTURAL RESEARCH V

The fifth in a series of BARC Symposia, "Biological Control in Crop Production," will be held May 18-21, 1980, in the BARC Auditorium. Topics to be covered include: concepts, principles, and mechanisms of biological control; resource and production consideration of biocontrol agents; strategies of biological control of insects, weeds, and plant pathogens; and general considerations of biological control. BARC employees are invited to attend the symposium. The registration fee will not be charged to BARC employees. Free registration, however, does not entitle Center employees to a copy of the proceedings of the symposium. All interested in attending Symposium V should obtain the registration sheet from their Institutes and register on time. Nonregistered Center employees will not be permitted to attend. Registration for the banquet is separate and prepayment is necessary.

SENSATIONAL SUPER SPUDS

Recently released USDA potato varieties now being commercially harvested in the East continue to show excellent promise for growers, processors, and consumers east of the Rocky Mountains. The varieties are: Atlantic, Belchip, and BelRus. They were developed by the Vegetable Laboratory, HSI, BARC, cooperating with NER's North Atlantic Area, as well as experiment stations in Virginia, New Jersey, Florida, and Maine. All of these varieties are currently in short seed supply. Potato producers in the South who contracted for seeds early in the fall received less than 50 percent of their 1980 seed needs of Atlantic and Belchip. BelRus and Atlantic rank 5 and 6, respectively, among 34 varieties grown for certified seed in Maine during 1979.

The R. T. French Company of Washburn, Maine, reopened their dormant \$7 million potato processing plant this past fall based upon the promise of the potato variety BelRus. Approximately 4,000 acres of BelRus were grown in Maine in 1979 for the fresh market; about 1,500,000 cwt will be merchandised this winter through several grocery chains--including one serving the Baltimore-Washington Area.

BelRus is a russet potato that is establishing a reputation as an excellent baking potato. A new marketing order in Maine establishes mandatory marketing standards for the BelRus variety to maintain the newly developed premium market for that variety.

SEA-AR SCIENTISTS' OUTSTANDING CAPABILITIES WELL RECOGNIZED

National, international, and regional recognition of an organization's scientists by peers is one measure of the quality of a research program and organization. BARC scientists serve as an excellent sample for SEA-AR.

Since 1973, BARC scientists have received 12 international awards and been elected as officers in two international professional societies. During that same period, BARC scientists have received 84 national awards and been elected to 9 national offices. At the regional level, they have received 9 awards and been elected to 8 offices. When this record is projected across SEA-AR, it illustrates the capabilities of our scientists and the respect in which they are held by their professional peers. We can be proud of this record of accomplishment.

PARKING FEES AT BARC

The General Services Administration (GSA) has reviewed the Appraisal of Fair Monthly Parking Rate Per Space for BARC, submitted on November 13 by the General Services Branch, AOD. The GSA has concurred with the recommendation which was presented and no monthly charges will be levied against employees for parking in the foreseeable future. All employees, however, are encouraged to participate in carpools and vanpools.

CONTRIBUTIONS TO CHILDREN'S HOSPITAL IN LIEU OF CHRISTMAS CARDS TO COWORKERS

A gift in the amount of \$790 "your contributions" was forwarded to Children's Hospital on January 2, 1980. You can be sure that your generosity will be appreciated and remembered by the young patients. It will help bring a little more joy into their lives. Thanks again for your consideration and kindness.

BLACK HISTORY OBSERVANCES

The month of February has been designated as Black History Month by President Carter. At the time of his announcement, the President noted that "...There is no way to separate black history from our own history. The history of black Americans is the record of America's battle with itself to establish the principles of justice, freedom, and equal opportunity on which it was founded...."

One group of USDA employees plans to sponsor a program at 1:30 p.m., Wednesday, February 20, 1980, in the BARC Auditorium. A variety of programs and special exhibits will take place in February to commemorate the contributions of black citizens to the growth and development of America.

BARC TELEVISION STARS

The Mayflower brought cockroaches as well as pilgrims to North America. In the Thanksgiving holiday special, "The Voyage of the Mayflower," John Alden speaks of roaches and weevils infesting their food supplies on the trip across the Atlantic. Filmed in historic St. Mary's City, Maryland, Syzygy Productions, Ltd., turned to BARC for their cockroaches. Although Blatta orientalis was most likely the cockroach species that came to the New England shores from Europe, Periplaneta americana got the nod from set director, Philip Smith, because the American cockroaches are larger and run faster than their oriental cousins. Their short but spectacular appearance was on CBS TV Thanksgiving eve.

COOPERATIVE RESEARCH

A joint panel meeting of the United States-Japan Natural Resources Project on Forage Germplasm Exchange and Evaluation was held at BARC on October 9. George A. White, Germplasm Resources Laboratory, PGGI, Chairman of the U.S. Panel, chaired the meeting and Essex E. Finney, Jr., Director's Office, welcomed the group. All panel members made presentations on their research and project progress. Future planning for completion of the project followed. The Japanese panel was represented by Dr. S. Kawanabe, Chairman, from the National Grassland Research Institute, Nishinasuno, and Mr. T. Yoshiyama, Kyushu Agricultural Research Station, Kumamoto. Dr. White and the two other U.S. panel members--James H. Elgin and Jerrel B. Powell, Field Crops Laboratory, PGGI--informally detailed their research activities after the panel meeting concluded. The Japanese visitors visited the Georgia Coastal Plain Experiment Station, Tifton, and the Western Regional Plant Introduction Station, Pullman, Washington, before they returned to Japan.

EMPLOYEE ACTIVITIES

Eight research entomologists from the Systematic Entomology Laboratory (SEL), and one from the Beneficial Insect Introduction Laboratory (BIIL), IIBIII, recently attended the 51st Annual Meeting of the Eastern Branch, Entomological Society of America (ESA), held in Hershey, Pennsylvania. Lloyd Knutson, Chairman, IIBIII, completed his term as president for the Eastern Branch and Douglass R. Miller, SEL, served as cochairperson of the program committee for these meetings. On November 25-29, eight research entomologists of the SEL attended the annual meeting of the Entomological Society of America held in Denver, Colorado. Submitted papers were presented by Curtis W. Sabrosky and Douglass R. Miller. Dr. Knutson, chairman of the ESA committee for Systematics Resources in Entomology, led a discussion of the ESA National Plan for Systematic Entomology.

Thomas E. Devine, Cell Culture and Nitrogen Fixation Laboratory, PPHI, was invited to provide consultation to the soybean research group at the Alabama A&M University, Normal, Alabama. The soybean research group includes a plant breeder, microbiologist, and plant pathologist. Dr. Devine visited the campus of Alabama A&M on November 7 and 8 and presented a seminar on "Genetic Improvement of Nitrogen Fixation."

EMPLOYEE ACTIVITIES (Continued)

Jack R. Plimmer, Chief, Organic Chemical Synthesis Laboratory, AEQI, has accepted an invitation to join the editorial advisory board of the Journal of Agricultural and Food Chemistry, a publication of the American Chemical Society.

The value of research in insect systematics and of prompt identification was recently demonstrated by R. D. Gordon, Systematic Entomology Laboratory, IIBIII. The State of Hawaii has been studying a predaceous beetle, Nephaspis amnicola, for release against a new immigrant whitefly which had reached epidemic proportions in shade trees and ornamental plants. Dr. Gordon had earlier published a systematic study of the genus Nephaspis and was able to identify the species accurately and quickly. As a result, the workers in Hawaii were able to have the beetle approved for release and were provided means to identify specimens of the beetle for future releases.

HONORS AND AWARDS

Cash Awards:

Barrett, John, Utilities and Services Branch, Division of Operations.
Brocker, Mary A., Livestock Protozoan Diseases Laboratory, API.
Brown, Doris L., Chairman's Office, API.
Chittams, Clara V., Chairman's Office, API.
Curtin, Robert J., Chairman's Office, API.
Ferst, Janet, Field Crops Laboratory, PGGI.
Fix, Raymond J., Chairman's Office, API.
Franklin, Laura M., Chairman's Office, API.
Gentry, Lucy, Protozoan Diseases Laboratory, API.
Jones, Madalyn E., Chairman's Office, API.
McDonough, Mary, Administrative Office, BARC Director's Office.
Peterson, Santalena, Chairman's Office, API.
Pumphrey, Howard A., Farm Management Branch, Division of Operations.
Rawls, Walter J., Hydrology Laboratory, PPHI.
Shaffer, George F., Jr., Chairman's Office, API.
Smothers, Joseph D., Chairman's Office, API.

Quality Increases:

Bartholow, Janet M., Fruit Laboratory, HSI.
Chaney, Norita, Reproduction Laboratory, ASI.
Roberts, Ralph T., Water Data Laboratory, PPHI.
Saltzberg, Charlotte, Vegetable Laboratory, HSI.

VISITORS

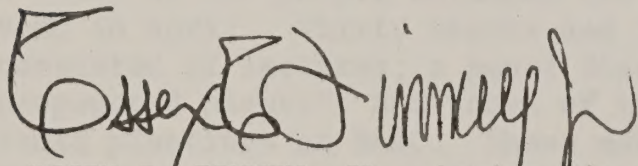
Pakistan--Mr. Mohammad Ismail, PL-480 sponsored potato project, Agricultural Research Institute, Sariab, Quetta, Baluchistan, visited the Vegetable Laboratory, HSI, during the week of December 6. Mr. Ismail and the staff of the laboratory discussed potato and vegetable research and breeding practices.

Russia--Thomas H. Barksdale, Vegetable Laboratory, HSI, recently escorted a team of Russian scientists on a 2-week tour of vegetable and potato storages. They visited several locations in New York, Michigan, Minnesota, North Dakota, and Idaho.

Sweden--Dr. Virger Swenssen, Uppsala University, Uppsala, visited BARC on December 13 and consulted with Raymon E. Webb, Chief, Vegetable Laboratory, HSI, and several other scientists in that laboratory concerning germplasm and breeding procedures of the potato.

Switzerland--Dr. Josef Zeyer, Microbiology Institute, Eidgenossische Technische Hochschule, Zurich, is on a 1-year postdoctorate study program in the Pesticide Degradation Laboratory, AEQI, working with Philip C. Kearney. Dr. Zeyer's program is funded by the Swiss National Research Funds. He is working on microbial metabolism of selected pesticides.

Thailand--On December 14, Dr. Vipata Boonsri Wangsai, Rector, and Dr. Prasong Vorayos, Vice Rector, Institute of Agricultural Technology, Mae Joe, Chiangmai, met with scientists in the Vegetable Laboratory, HSI, regarding potato and vegetable research opportunities and materials for Thailand.



ESSEX E. FINNEY, JR., Acting Director
Beltsville Agricultural Research Center

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NOTES FROM THE DIRECTOR

No. 117

August 13, 1980

BARC SYMPOSIUM V

The fifth in a series of BARC Symposia, "Biological Control in Crop Production," was held May 18-21, 1980, at Beltsville. The Symposium was attended by 400 scientists and was very successful. Of the total number of scientists who attended, the following breakdown indicates percentages of disciplines in attendance: Entomologists - 44%; Plant Pathologists - 33%; Weed Scientists - 11%; Nematologists and Mycologists - 12%. Following the welcoming remarks by the Acting Director, Essex E. Finney, Jr., the Symposium was introduced by George C. Papavizas, Symposium Chairman. Speakers from the United States, Canada, England, and Switzerland discussed biological control of insects, plant diseases, weeds, and nematodes. The papers presented covered a broad range of topics from practical applications of biological control to basic and theoretical concepts. The Symposium was thoughtfully summarized by M. T. Ouye, Program Planning Staff, SEA. At the banquet address, Dr. Howard C. Whisler, Professor of Botany, University of Washington, Seattle, charmed the audience with his presentation "The Fungi vs. the Insects."

FRUIT PLANT TISSUE CULTURE CONFERENCE

A total of 197 people attended the Fruit Plant Tissue Culture Conference at BARC in April. Thirty States and five countries were represented. The program consisted of lectures; a panel discussion on "Genetic stability of tissue culture propagated plants"; and tours of tissue culture laboratories, greenhouses, and field plantings at BARC. Those making presentations included: W. C. Anderson, Washington State University, Mt. Vernon; T. Y. Cheng, Oregon Graduate Center, Beaverton; C. Damiano, Istituto Sperimentale per la Frutticoltura, Rome; A. Donnan, Jr., Oakdell, Inc., Apopka, Florida; P. R. Fridlund, Washington State University, Prosser; W. R. Krul, University of Rhode Island; S. Singha, West Virginia University, Morgantown; O. C. Broome, M. Faust, J. R. McGrew, R. H. Zimmerman, and D. H. Scott (retired), Fruit Laboratory, HSI; and G. W. Schaeffer and F. Hammerschlag, Cell Culture and Nitrogen Fixation Laboratory, PPHI. The program was organized by R. H. Zimmerman, F. Hammerschlag, and J. R. McGrew; A. A. Piringer, M. Faust, and R. H. Zimmerman served as program moderators.

NE 107 POTATO PROJECT MEETING

The NE 107 Potato Project "Potato Breeding and Evaluation," held its annual meeting at BARC-West in February. Approximately 40 people attended, representing State, Federal, commercial research, and State foundation and certified seed programs. Essex E. Finney, Jr., Acting Director, welcomed the

visitors to the Center. The purpose of the meeting was to exchange information on clonal performance of advanced selections under the diverse environments and management practices in the Northeast Region, Ohio, and Virginia. The group enjoyed a tour of BARC provided by the Visitor Unit, followed by a tour of the potato research facilities and activities here. Research presentations were made by Robert W. Goth, Lind L. Sanford, Stephen L. Sinden, and Raymon E. Webb, Vegetable Laboratory, HSI. In the evening, following dinner at the Domino, Albert A. Piringer, Chairman, HSI, entertained the group with a highly unique approach to name selection for new potato varieties. Among those who attended the dinner were: Mr. Joseph L. Harrington, Director of Plant Industry, Maine Department of Agriculture, Augusta; Mr. Edward Plissy, Executive Director, Maine Potato Commission, Presque Isle; Mr. David Matthews, Director of Research, Agway, Inc., Syracuse, New York; and Paul A. Putnam and Essex E. Finney, Jr., BARC Director's Office.

AWARDS AND RECOGNITION

Curtis W. Sabrosky, Systematic Entomology Laboratory (SEL), IIBIII, received the USDA Distinguished Service Award at the Departmental Awards Ceremony on May 22. Dr. Sabrosky is one of the world's authorities on the taxonomy of parasitic flies important as biological control agents of pest insects, and his 344 scientific papers have established him as an outstanding taxonomist. His sustained, outstanding work on zoological nomenclature has raised him to a highly influential position in biology. Since joining the USDA in 1946 he received the Superior Service Award in 1952, and was a member of the Diptera Unit who received the Superior Service Award in 1962. Dr. Sabrosky is the second SEL scientist to receive the Distinguished Service Award--the first was C. F. W. Muesebeck in 1951.

Bradford W. Berry, Marilyn Stanfield, and Judy Quick from the Meat Science Research Laboratory, ASI, were recipients of a Superior Group Achievement Award, in conjunction with staff from FSQS, at the May 22 Departmental Awards Ceremony. The Award was presented to recognize research to determine the efficacy of reducing the level of nitrite added to bacon from 120 ppm to 40 ppm in conjunction with the addition of 0.26% potassium sorbate. The Department had published in the Federal Register (before the research was initiated) the intent to require the meat industry to utilize potassium sorbate in bacon. As a result of the joint research effort potassium sorbate was shown to cause undesirable palatability changes in bacon and is not being allowed by either USDA or FDA for use in bacon.

Harry R. Carns, retired Chairman of the Plant Physiology Institute, has been elected Fellow of the American Association for the Advancement of Science (AAAS) for: "research on the physiology of the cotton plant and for fundamental contributions to the understanding of abscission."

Philip C. Kearney, Chief, Pesticide Degradation Laboratory, AEQI, has been elected Fellow of the American Association for the Advancement of Science for: "research on the fate of pesticides in the environment, including their metabolism by soil microorganisms, and recognition as a world authority."

John G. Moseman, Chairman, Plant Genetics and Germplasm Institute, has been elected Fellow of the American Association for the Advancement of Science for: "research on host-parasite interactions relating to diseases in crops, particularly barley, thus providing basic information for development of resistant varieties."

A Fellow of the AAAS is defined as "a member whose efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished."

J. David Warthen, Jr., Biologically Active Natural Products Laboratory, AEQI, received a Research Publication Award from the Naval Research Laboratory, in recognition of the technical merit and literary clarity of the publication "Brassinolide, a Plant Growth-Promoting Steroid Isolated from Brassica napus Pollen," which he coauthored.

Jerrel B. Powell, Chief, Field Crops Laboratory, PGGI, received the American Forage and Grassland Council Merit Certificate at the meeting of the Council in Louisville, Kentucky, on February 13. The award was for his contributions to forage and grassland agriculture through his research and administrative leadership.

Victor L. Miller, Chief, Farm Management Branch, Division of Operations, was elected president-elect for 1981 of the Northeastern Society of Agricultural Research Managers, at the annual meeting held in Lancaster, Pennsylvania, January 8-10. Goals of the Society are to further the progress of Agricultural Research Station management by promoting education, cooperation, and interaction between the managers. Members include representatives from Government, State universities, manufacturing firms, private corporations, and other agricultural organizations with an interest in agricultural research under field conditions.

Miklos Faust, Chief, Fruit Laboratory, HSI, was elected president of the Northeastern Section of the American Society for Horticultural Science, at the annual regional meeting held in New Haven, Connecticut, January 10-11.

Thomas E. Devine, Cell Culture and Nitrogen Fixation Laboratory, PPHI, was elected to a 3-year term on the National Council of the American Genetic Association, which met on January 26. The Council serves as the governing body of the American Genetic Association which publishes the Journal of Heredity.

The American Genetic Association has appointed Robert H. Miller, Chief, Milk Secretion and Mastitis Laboratory, ASI, as its representative to Section O (Agriculture) of the American Association for the Advancement of Science.

Cash Awards:

Dendy, Wallace L., Light and Plant Growth Laboratory, PPHI.

DeWeese, Howard, Farm Management Branch, Division of Operations.

Dungey, William A., Light and Plant Growth Laboratory, PPHI.

Enzian, Preston A., Farm Management Branch, Division of Operations.

Faltynski, James E., Meat Science Research Laboratory, ASI.

Funkhouser, Wayne H., Farm Management Branch, Division of Operations.

Goroum, Herman E., Maintenance and Construction Branch, Division of Operations.

Grubb, Paul V., Engineering and Planning Branch, Division of Operations.
McCloud, Miguel L., Plant Stress Laboratory, PPHI.
Nupp, Joel T., Non-Ruminant Parasitic Diseases Laboratory, API.
Pheder, Leon F., Utilities and Services Branch, Division of Operations.
Putnam, Paul A., BARC Director's Office.
Sirk, Judith A., Insect Reproduction Laboratory, AEQI.
Spencer, Rodney, Ruminant Nutrition Laboratory, ASI.
Vinton, Margaret, Economic Botany Laboratory, PGGI.
White, James, Non-Ruminant Parasitic Diseases Laboratory, API.
Yates, Robert L., Maintenance and Construction Branch, Division of Operations.

Quality Increases:

Bolton, Gladys R., Chairman's Office, AEQI.
Bragg, Louise H., Chairman's Office, IIBIII.
Chiddo, Rosa M., Chairman's Office, HSI.
Collins, Georgette M., Bioenvironmental Bee Laboratory, PPI.
Gavelek, Debra M., Avian Physiology Laboratory, ASI.
Kaminski, Gretchen, Avian Physiology Laboratory, ASI.
Kilby, Harriett A., Chairman's Office, PPHI.
Kirkpatrick, Vivian D., BARC Administrative Office.
Pruitt, Shirley A., Milk Secretion and Mastitis Laboratory, ASI.
Roberts, Doris A., Chairman's Office, PPI.
Stetka, Diane K., BARC Administrative Office.
Toffon, Florence D., BARC Director's Office.
Uebel, Edward C., Biologically Active Natural Products Laboratory, AEQI.

COOPERATIVE RESEARCH

VARIETY RELEASES

Four new strawberry cultivars are being released for commercial propagation and introduction from the cooperative breeding program of USDA-SEA and the North Carolina Agricultural Research Service. The new strawberries are: PRELUDE, SUMNER, SENTINEL, and ROXANNE. They are developed for areas in the upper and Midsouth where strawberries can be grown. PRELUDE matures its fruit very early; it is very fine flavored and best suited for the pick-your-own market. SUMNER is a large and very productive midseason berry suited to all areas except where the anthracnose disease is a problem. SENTINEL produces very large, attractive fruit in the late season. ROXANNE matures heavy crops of large, attractive, high-quality fruit in the very late season. These new varieties give a new series of improved berries in the areas for which they are developed.

Two evergreen ornamental blueberries appeared in the species hybridization program and they have considerable ornamental value. EVERBLUE and JOHNBLUE are selected forms of low-growing, small, blue-fruited Vaccinium darrowi Camp, a species native to Florida and adjoining Gulf Coast areas. Selected in North Carolina, these two varieties should prove hardy enough to complement outdoor azalea and camellia plantings from southern Virginia to the Gulf of Mexico. They also show considerable potential for indoor culture as pot plants or in hanging baskets.

Drs. M. Ristic and M. Levy (University of Illinois), J. Kreier (Ohio State University), and R. Todorovic (International Minerals and Chemical Corporation, Terre Haute, Indiana) visited the Hemoparasitic Diseases Laboratory, API, in March to discuss protocol details and to initiate a preliminary Babesia bovis vaccine trial to be conducted at API. This vaccine, developed at the University of Illinois by Dr. Levy, is unique as it has been prepared from organisms grown using tissue culture techniques. A surface coat antigen is prepared from the Babesia organism and combined with a saponin adjuvant. Subcutaneous injections of this vaccine reportedly produce a high level humoral antibody response and good subsequent immunity without the hazards of contaminating erythrocytic stromal antigens. The interest in this vaccine is extremely widespread, and the trials being conducted here will be important to its acceptance and eventual commercial use. Dr. M. Orsorno (Instituto Nacional de Investigaciones Pecuarias, Mexico City) visited API in April to discuss this vaccine trial, and a subsequent study is planned in which yearling cattle will be vaccinated and later challenged.

In January of this year, Dr. Stephen A. Lewis, Department of Plant Pathology and Physiology, Clemson University, Clemson, South Carolina, began a 9-month sabbatical leave in the Nematology Laboratory, PPI. He is working with A. Morgan Golden on the taxonomy, morphology, and relationships of plant-parasitic nematodes and will concentrate primarily on certain important species of stunt and awl nematodes, some of which will be described as new species. In addition, he will devote some time on the morphology and identification of various root-knot nematodes of major economic importance in the southeastern United States.

Dr. A. K. Roy, Senior Scientist, Regional Research Station, Assam Agricultural University, Diphu, India, returned to India in late March following several months working on a biological control of nematodes project with Richard M. Sayre, Nematology Laboratory, PPI.

EMPLOYEE ACTIVITIES

Martin Jacobson, Chief, Biologically Active Natural Products Laboratory, AEQI, was 1 of 30 internationally recognized natural products scientists invited to participate in the Scientific Working Group on the Use of Naturally Occurring Plant Products in Pest and Disease Control, held in May in Nairobi, Kenya. The meeting was convened by the International Centre of Insect Physiology and Ecology (ICIPE), and funded by the United Nations Development Program. Mr. Jacobson presented a paper entitled "Insect Feeding Deterrents from Plants of the Meliaceae and Euphorbiaceae." ICIPE has one of the most productive programs worldwide on the chemistry and biochemistry of biologically active substances from tropical plants and insects, with special application to the developing countries of Africa and Asia. Mr. Jacobson was among 10 participants chosen following the meeting to act as an advisory committee for ICIPE's 1980-81 program.

Martin Jacobson, Chief, and J. David Warthen, Jr., Biologically Active Natural Products Laboratory, AEQI, and Robert E. Redfern, Livestock Insects Laboratory, AEQI, were invited participants in the First Neem Conference, in June, in Tegernsee, Federal Republic of Germany. The purpose of the international conference, sponsored by the Germany Research Foundation and the German Society

for Technical Cooperation, was to assess the worldwide progress of research and application of products of the neem tree, Azadirachta indica, as well as development of the tree as a commercial crop in many areas of the world. The 45 participants in attendance represented the United States, Germany, France, England, Belgium, Switzerland, Netherlands, Israel, India, Philippines, Sudan, Mauritius, Nigeria, and Togo. Mr. Jacobson presented two papers: "Isolation and Identification of Insect Antifeedants and Growth Inhibitors from Plants: An Overview," and "Neem Research in the U.S. Department of Agriculture: Chemical, Biological, and Cultural Aspects." He also chaired a lecture session and a final discussion session. Dr. Warthen chaired a lecture session and presented a paper entitled "Azadirachtin and Its Effects on House Crickets, Acheta domesticus," and Mr. Redfern presented a paper entitled "Antifeedant and Growth Disruption Effects of Azadirachtin on Spodoptera frugiperda and Oncopeltus fasciatus." Mr. Jacobson was also appointed chairman of a Steering and Planning Committee for neem research in the developing countries, and coordinator of neem research in the United States under an International Neemtreet Research Program with headquarters in Paris.

Jack R. Plimmer, Chief, Organic Chemical Synthesis Laboratory, AEQI; James L. Vaughn, Chief, Insect Pathology Laboratory, PPI; and Dr. J. Wheeler, Chemistry Department, Howard University, took part in the radio program "Kaleidoscope" emanating from American University's radio station WAMU. The program was in the form of a panel discussion with replies to listeners' phone-in questions. Topics included pheromones, biological control, pesticides, and pest management.

James L. Vaughn, Chief, Insect Pathology Laboratory, PPI; Jack R. Plimmer, Chief, Organic Chemical Synthesis Laboratory, AEQI; and Dr. Wheeler, Howard University; were guest speakers on the WAMU-FM radio program "Kaleidoscope." The program was a 1-hour open-mike discussion concerning microbials for biocontrol of insects.

Harry Herlich, Michael D. Ruff, Wayne M. Frerichs, and Robert S. Rew, API, attended the annual meetings of the Animal Disease Research Workers in the Southern States; and the Coordination Committee, Internal Parasites; at the Oklahoma State University, Stillwater. Dr. Ruff presented an invitational paper entitled "Pathophysiology: Some Responses of Avian Host to Coccidiosis." Dr. Frerichs gave a talk on "Response of Ponies Vaccinated with Non-Viable Babesia equi Antigen," and Dr. Rew talked on "Prophylactic Chemotherapy for Facioliiasis."

Jack A. Lewis, Soilborne Diseases Laboratory (SDL), PPI, recently participated in the annual meeting of the Southern Research Task Force/Pickle Products International at Little Rock, Arkansas, the latter part of February. He presented a resume of 3 years of field research performed at BARC on integrated management systems for reduction of Rhizoctonia fruit rot on cucumbers, research performed jointly with George C. Papavizas, Chief, SDL, PPI.

Robert S. Rew and Raymond H. Fetterer, Ruminant Parasitic Diseases Laboratory, API, were invited to the American Cyanamid Company, Princeton, New Jersey, in June, to discuss the use of in vitro methods for development of antiparasitic drugs with scientists of the Agricultural Research Division and to present a seminar entitled "The Role of Helminth Metabolism in Anthelmintic Research."

In a New York Times article on June 8, staff writer Seth King declared that "Agricultural Science Checks Good Taste." The article was about sensory evaluations of agricultural products and is based, in part, on an interview with Judy Abbott, Horticultural Crops Quality Laboratory (HCQL), HSI. King discussed HCQL's comparison of sensory panel results with tests made on the "'iron nose'--gas or liquid chromatographs that identify and measure the amount of chemicals present in apples, tomatoes, or peaches" and with the "'calibrated iron jaw' (force/deformation instruments) that record texture, firmness, and toughness..." He also mentioned use of light transmittance tests at Beltsville and the ongoing consumer tests of the potential new vegetable crop, amaranth. As a result of that article, several other inquiries were received. On June 16, Judy Abbott taped a telephone interview with Annette Jurgens of Iowa Public Radio, Des Moines. On June 19, she taped an interview with Liane Hansen, weekend host for "All Things Considered" of National Public Radio, Washington, D.C. Another call was received from Ira Wolfman, freelance writer for "Next Magazine," and editor at Children's Television Workshop. Each caller was particularly interested in the Government's concern with the quality of foods as perceived by the average consumer, as well as the industry definitions of quality. Each also expressed an interest in research on new food crops, not only on amaranth.

Earlier this year, William W. Cantelo, Vegetable Laboratory, HSI, spoke to students and faculty of the Department of Entomology, University of Maryland, on the subject "Insects Affecting Mushroom Culture." In March, he recorded a radio program for the USDA Office of Governmental and Public Affairs concerning insect control in the organic garden; spoke to the Beltsville Garden Club concerning "Control of Insect Pests in the Home Garden"; and spoke to approximately 150 members of various segments of the southeastern Pennsylvania mushroom industry on the subject "Sciariid Fly Control by Chemicals Incorporated Into Compost--Recent Advances."

Charles D. Foy, Plant Stress Laboratory, PPHI, spoke on "Adapting Forage Plants to Mineral Stress in Problem Soils" to a group of 25 scientists attending a Northeast Forage Meeting (January 10) at BARC. In April, he spoke on the same topic to staff and graduate students in the Agronomy Department, Purdue University, West Lafayette, Indiana. In May, Dr. Foy conducted an invitational seminar and conferred with graduate students and staff in the Department of Crop and Soil Sciences, and the Department of Horticulture, Michigan State University, East Lansing. The topic was "Plant-Genotype-Mineral Stress Relationships in Problem Soils."

NEW EMPLOYEE

Raymond H. Fetterer has joined the Ruminant Parasitic Diseases Laboratory, API, as a Research Zoologist. He is a native of Michigan, receiving his B.A. and M.A. degrees from Western Michigan University (Kalamazoo), and his Ph. D. degree from Michigan State University (East Lansing). His research will be on the neurophysiology of nematode parasites, especially as related to chemical activity.

PERSONNEL CHANGES

During the past 6 months, a number of changes have been made in key leadership positions at the Center. These new assignments are listed below:

N. Jerry Chatterton, Chief, Light and Plant Growth Laboratory, PPHI.
Meryl N. Christiansen, Chairman, PPHI.
Ronald Fayer, Chief, Ruminant Parasitic Diseases Laboratory, API.
Harry Herlich, Chairman, API.
Vivian D. Kirkpatrick, Administrative Officer and YACC Camp Director.
Paul M. Marsh, Chief, Systematic Entomology Laboratory, IIBIII.
Paul A. Putnam, Director.
Howard E. Waterworth, Chief, Germplasm Resources Laboratory, PGGI.

* * * * *

The Animal Parasitology Institute has been restructured with laboratory name changes as follows:

Hemoparasitic Diseases (formerly Livestock Protozoan Diseases)
 Poultry Parasitic Diseases (formerly Poultry Protozoan Diseases)
 Non-Ruminant Parasitic Diseases (formerly Non-Ruminant Helminthic Diseases)
 Ruminant Parasitic Diseases (formerly Ruminant Helminthic Diseases)

ASSOCIATION OF SUPERVISORS AND MANAGERS

The annual election of officers of the BARC Association of Supervisors and Managers (ASM), was conducted on March 20, 1980. The new officers are: President, Neal O. Morgan (AEQI); Vice President, Suzanne Hearon (HSI); Secretary, Freddi Hammerschlag (PPHI). The new councilors are: Maxwell M. Crystal (AEQI); William J. VanderWoude (PGGI); Joseph Urban and Dale Witlock (API); Rex Powell (ASI); Raymond Gagne and Carl Goodpasture (IIBIII); Suzanne Hearon (HSI); Perry Cregan (PPHI); and David Farr (PPI).

A seminar was sponsored by the ASM on April 10. The guest speaker was Dr. Anson R. Bertrand. Following the seminar a reception was held to honor visiting scientists currently working in support of BARC research programs.

COMMUNICATIONS TRAINING

Individuals interested in improving their communication skills should consider participation in one of the Toastmasters Clubs at BARC. Two such clubs are active at the Center: The Plant Industry Club, which meets the second and fourth Thursdays, at 12 noon, in the Range 4 Conference Room, Building 050, BARC-West; and the ARC Club, which meets every other Wednesday, in Room 114, Building 307, BARC-East, at 5 p.m. The training received through Toastmasters is considered as a valid employee development activity, and BARC employees can have the first 2 years of membership fees paid through training funds. Contact Harold Moline (344-3128) or Alex Krynetsky (776-4880, Ext. 246) for further information.

VISITOR UNIT FLAG DISPLAYS

Facilities to display the flags of their countries in honor of our visitors have been installed in the Cafeterias by the Visitor Unit. It is expected that the flags of short-term visitors will be on the front row of the display case for 1 week. Flags for the long-term visitors will be on the back row. The Visitor Unit will cooperate in putting flags for your visitors in the cases. Please notify them by c.o.b., Friday of the week before the visitor(s) arrives. Incidentally, the flags of the countries are put in alphabetical order according to the United Nations' list for such displays.

VISITORS

Australia--The SEA International Activities Office arranged for Mr. R. W. Murnain, CSIRO, to visit BARC while on his 2-day visit with the Science and Education Administration in the Washington Metropolitan Area.

Canada--In February, the owner and technical staff of Champignons Slack, Ltd., the largest mushroom producing company in Canada, visited James P. San Antonio and Kenneth L. Deahl, Vegetable Laboratory, HSI.

Chile--Luis Fidel Lobos (Eisenhower Exchange Fellowship), General Manager of Hector Lobos Arias, San Javier, was greeted by Paul A. Putnam, Assistant Director, followed by a meeting with Miklos Faust, Chief, Fruit Laboratory, HSI.

Costa Rica--Fernando Rivera (Eisenhower Exchange Fellowship), Dean of Earth and Sea Sciences National University, Heredia, was welcomed by Essex E. Finney, Jr., Acting Director, followed by a visit with Robert Yeck, NPS. The Visitor Unit furnished a general overview later in the day.

France--Mr. Bernard Naert, in charge of research at the French National Institute of Agricultural Research, Office of Soil Study, Montpellier, visited the Hydrology Laboratory, PPHI, in July. Mr. Naert's area of research is the study of remote sensing applied to soils in the visible and infrared ranges. He has experimented with different airborne sensors at different altitudes and has studied Landsat imagery at five test sites in the Mediterranean area of France.

France--Dr. Jacques van Assche and Dr. J. J. Herve, Plant Protection Department, Roussel-Uclaf, Marseille, visited the Biologically Active Natural Products Laboratory, AEQI, to discuss naturally occurring insect feeding deterrent with Martin Jacobson.

Germany--Dr. Klaus Meyn, Executive Secretary of the Association of German Animal Production Organizations, visited the Animal Improvement Programs, ASI, recently, to learn more about the laboratory's research program and its impact on the genetic improvement of dairy cattle in the U.S.

India--Dr. G. Ganga Raja, Director, Chemiloids, Vijayawada, India, visited the Biologically Active Natural Products Laboratory, AEQI, to discuss the marketing of neem-derived insect feeding deterrents in the United States.

India--Dr. Shankar V. Amonkar (on a Fellowship with the International Atomic Energy Agency) visited with James L. Vaughn, Ronald H. Goodwin, and other scientists in the Insect Pathology Laboratory, PPI. Dr. Amonkar is in the U.S. to discuss mutual problems in insect pathology, insect virology, and insect tissue culture.

Israel--Dr. Reuven Bar-Anan, Leader of Livestock Improvement Programs, Volcani Research Organization (VRO), Israel, visited the Animal Improvement Programs Laboratory (AIPL), ASI, in June, to learn the latest genetic evaluation procedures used by AIPL for dairy cattle in the U.S., and to discuss the possibilities for cooperative research between the laboratory and the VRO. Dr. Bar-Anan has been involved in livestock improvement in Israel for approximately 30 years and has been the leader of the Israeli Livestock Genetic Improvement Programs for the past 20 years.

Israel--Mr. Amiel Oren met with Robert G. Yeck, NPS, (rural development); Elmer E. Jones, Jr., BARC, (rural water systems); and George B. Willson, Biological Waste Management and Organic Resources Laboratory, AEQI (sludge compost); concerning rural settlement planning.

Japan--This spring, Mr. Gen Ito, Administration Division, and Dr. Shinzo Nishibi, Research Coordinator, Agriculture, Forestry and Fisheries Research Council, were greeted by Acting Director, Essex E. Finney, Jr.

Netherlands--Dr. Jasper E. VanZanten, Director of Research, Sluis and Groot B.V., Enkhuizen, visited the Vegetable Laboratory, HSI, to consult with Allan K. Stoner and Thomas H. Barksdale on tomato research and breeding, and with Gilbert D. McCollum on cole crops.

New Zealand--Seven representatives of the New Zealand dairy industry visited the Animal Improvement Programs Laboratory (AIPL), ASI, in March. They were interested in operational aspects of the National Cooperative Dairy Herd Improvement Program (NCDHIP), the genetic evaluation of dairy cattle, and control of mastitis. AIPL was one of two research organizations that the group visited in the U.S. during a round-the-world tour. Frank N. Dickinson, AIPL Chief, described the lab's work and interaction with the U.S. dairy production industry; R. H. Miller, Milk Secretion and Mastitis Laboratory Chief described mastitis research at BARC; and Dr. J. Lee Majeskie, extension dairyman at the University of Maryland, described operational procedures used in NCDHIP in Maryland.

Norway--Mr. Oskar Oksnes, Minister of Agriculture, visited with several NPS scientists, including Essex E. Finney, Jr., Acting BARC Director. The Minister's visit was short, but the Visitor Unit provided a quick tour of the Research Center before his noon departure.

People's Republic of China--Minister of Agriculture Huo Shilian was greeted by Acting Director, Essex E. Finney, Jr., followed by visits with Paul M. Marsh, Systematic Entomology Laboratory, IIBIII; Karl H. Norris, Instrumentation Research Laboratory, HSI; George C. Papavizas, Soilborne Diseases Laboratory, PPI; and Dale E. Waldo and Henry F. Tyrrell, Ruminant Nutrition Laboratory, ASI. The Visitor Unit provided a loop tour of the North Farm. Tien C. Tso, Tobacco Laboratory, PGGI, assisted the Director's Office in cohosting the Minister and his staff.

Philippines--Mario S. Tongson, D.V.M., Associate Dean and Professor of Parasitology, and S. R. Hermosura, Professor of Animal Science, College of Veterinary Medicine, University of the Philippines, Quezon City, visited with Harry Herlich, Chairman, and other scientists in the Animal Parasitology Institute.

Poland--Ms. Danuta Skut, Agronomist from Warsaw, visited with Florence M. Cox, Program Assistant, Seed Research Laboratory, PGGI, in May, to discuss the rules and procedures of the Organization for Economic Cooperation and Development (O.E.C.D.) Seed Schemes. Their primary interest was in the Maize Seed Scheme, with secondary interest in the Herbage and Oil Seed Scheme. John T. Watson, Research Coordinator, and Bob Walker, Sales Coordinator, Pioneer Hi-Bred International, Inc., Des Moines, Iowa, accompanied Ms. Skut on her BARC visit.

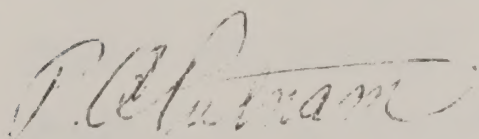
Poland--Dr. Zbigniew Gertych, Director, and Dr. Jozef Bakowski, Scientific Secretary, Institute of Vegetable Crops, Scierniewice, visited James P. San Antonio, Vegetable Laboratory, HSI, to consult on the PL-480 Project on mushrooms.

South Africa--Dr. Johannes E. Nel, Attache, and three representatives of the Government of Venda, Messrs. G. M. Ramabulana, E. Mulaudzi, and P. Bodha, were given a general tour of BARC earlier this year.

South Africa--Dr. Raymund Naude, Head, Meat Research, Animal and Dairy Science Research Institute, visited with A. W. Kotula, Chief, Meat Science Research Laboratory, ASI, and several other scientists in that laboratory, in March, concerning research on the quality and wholesomeness of meat.

Sweden--Drs. P. Mattsson and Bengt Nygard, representing the National Swedish Laboratory for Agricultural Chemistry, visited BARC in March. They were greeted by Essex E. Finney, Jr., Acting Director, and then visited the following Laboratory Chiefs: Karl H. Norris, Instrumentation Research, HSI; Kenneth R. Hill, Analytical Chemistry, AEQI; and Kent Stewart, Nutrient Composition, Beltsville Human Nutrition Research Center.

Thailand--Mr. Boonruang Thavornsawat, member of Parliament, Bangkok, accompanied by Mr. Jon Harger, Interpreting Branch, Language Services Division, State Department, visited BARC and were greeted by Essex E. Finney, Jr., Acting Director.



P. A. PUTNAM, Director
Beltsville Agricultural Research Center

UNITED STATES DEPARTMENT OF AGRICULTURE
SCIENCE AND EDUCATION ADMINISTRATION

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BELTSVILLE AGRICULTURAL RESEARCH CENTER
BELTSVILLE, MARYLAND 20705

NOTES FROM THE DIRECTOR

No. 118

September 29, 1980

PERSONNEL

Lou Gasbarre will be working as a research associate with the Non-Ruminant Parasitic Diseases Laboratory, API, during the next year on a specific cooperative agreement with the University of Maryland. Dr. Gasbarre received his Ph. D. degree at the University of Maryland and has recently completed 2 years of post-doctoral study in immunoparasitology at the World Health Organization Immunology Institute in Switzerland.

Jeffrey R. Aldrich joined the Insect Physiology Laboratory, PPI, in July as a research entomologist. He received his B.S. and M.S. degrees at the University of Missouri, a Ph. D. at the University of Georgia, and held postdoctoral appointments at the University of Georgia and the New York State Agricultural Experiment Station. His research will focus on the endocrinology and exocrinology of insects, particularly of the Hemiptera.

Harry D. Danforth has joined the Poultry Parasitic Diseases Laboratory, API, as a microbiologist. Dr. Danforth received his B.S. degree at the University of Illinois and his M.S. and Ph. D. degrees at Utah State University. His research will be primarily on in vitro and in vivo development of poultry protozoa, specifically coccidia.

Roger H. Lawson has been designated to serve as "Acting" Chief of the Florist and Nursery Crops Laboratory, HSI, for the period September 7, 1980, through June 19, 1981, while H. Marc Cathey is temporarily with Ohio State University.

DEATH OF BARC SCIENTIST

Joseph F. Worley, Plant Hormone and Regulators Laboratory (PHRL), PPHI, died suddenly on May 29 following a heart attack. Survivors include his wife, Anita, and his father, Joseph F. Worley, Sr. Dr. Worley was born in Washington, DC, graduated from Western High School, served 2 years in the Army in Germany, and returned to continue his education at George Washington University where he received his B.S. and Ph. D. degrees. He began his career with USDA at Beltsville while attending the university. Dr. Worley was noted for his expertise in microscopy and conducted early work on the translocation of plant viruses which helped explain how they spread. He also was instrumental in describing a new type of microorganism, Spiroplasma, which is associated with many plant diseases. More recently, he had primary responsibility for discovering and describing biological activity of natural products which regulate the growth of plants. Over the years, he cooperated with scientists at Beltsville and at other laboratories around the country. He provided microscopy expertise for many projects, and was author on a number of important papers.

EMPLOYEE ACTIVITIES

Gilbert D. McCollum, George W. L. Walter, and Philip Baum, Vegetable Laboratory, HSI, and Mr. William Youngman, former horticulture columnist for the Washington Star, conducted the judging of the Annual Vegetable Garden Contest held at the U.S. Soldiers and Airmen's Home, Washington, DC. First, second, third, and honorable mention awards were made to members who competed in regular garden-size plots of 30' x 100' on the basis of selection and diversity of crops grown, cultural practices, succession of crops, and general appearance. An award was also made for competition for half-size gardens of 30' x 50'. The interest and competition between the members were at a high level. This event was organized under the guidance of Mr. Browne, Chairman of Arts and Crafts at the Home.

At the recent meeting of the American Dairy Science Association, a report was presented by SEA-AR and University of Maryland researchers announcing production of the first monoclonal antibodies to cattle immunoglobulin class IgG. Monoclonal antibodies are highly specific research reagents and are of great use in basic studies in both human medical and animal disease applications. This work was done by Dr. S. Srikumaran and Dr. Richard Goldsby, University of Maryland, and Albert J. Guidry, Milk Secretion and Mastitis Laboratory, ASI.

Members of the Animal Parasitology Institute presented 11 papers at the 25th Annual Meeting of the American Association of Veterinary Parasitologists, and had a poster session at the Annual Meeting of the American Association of Avian Pathologists. These meetings were part of the American Veterinary Medical Association Meeting held in Washington, DC, in July.

Animal Parasitology Institute staff presented 11 papers at the 55th Annual Meeting of the American Society of Parasitologists. Frank W. Douvres, Ruminant Parasitic Diseases Laboratory, presented a paper at the President's Symposium in which he reviewed the state of the art and his 20 years' experience in cultivating parasitic nematodes in vitro. Ralph Lichtenfels, Head, Parasite Classification and Distribution Unit, was elected Chairman of the Nominating Committee for 1981.

Harry Herlich, Chairman, API, and K. Darwin Murrell, Chief, Non-Ruminant Parasitic Diseases Laboratory, API, participated in the Annual Meeting of the W-102 Technical Committee, Western States, Biological Control of Parasites.

Joseph Urban, Non-Ruminant Parasitic Diseases Laboratory, API, received a travel award from the American Association of Immunologists to attend the International Congress of Immunology, held July 20-25 in Paris, France. Mr. Urban presented a paper on his work on the cellular regulation of immediate hypersensitivity.

K. Darwin Murrell, Chief, Non-Ruminant Parasitic Diseases Laboratory, API, chaired the session on Parasite Immunology and Pathology at the International Pig Veterinary Congress, Copenhagen, Denmark, June 30-July 3. On July 20, Dr. Murrell presented a paper entitled "Vaccines Against Swine Parasites" at the Annual Meeting of the Association of Veterinary Parasitologists in Washington, DC.

The paper "Potent Juvenile Hormone Mimics Derived from 4-(Benzyloxy)Benzene" was presented by Albert B. DeMilo, research chemist, Alexej B. Borkovec, Chief, Insect Reproduction Laboratory, and Robert E. Redfern, research entomologist, Livestock Insects Laboratory, AEQI, at the Second Chemical Congress of the North American Continent, August 26, at Las Vegas, Nevada.

Alexej B. Borkovec, Chief, Insect Reproduction Laboratory (IRL), AEQI, presented a paper on "New Chemical Inhibitors of Insect Reproduction" at the XVI Congress of Entomology, Kyoto, Japan, in August. A paper coauthored by Thomas J. Kelly, research physiologist, IRL, entitled "Hormonal Regulation of Ovarian Development in Two Autogenous Mosquitoes" was also presented at the Congress.

James A. Svoboda, Chief, Insect Physiology Laboratory, PPI, presented a paper entitled "Comparative Aspects of Sterol Metabolism in Insects" at the Metabolic Aspects of Lipid Nutrition in Insects Symposium, XVI International Congress of Entomology, Kyoto, Japan, August 3-9.

In June, Malcolm J. Thompson, Insect Physiology Laboratory, PPI, presented a talk on "Non-Steroidal Amines that Inhibit Insect Development and Steroid Metabolism," at the Institute of Chemistry, University of Cluj, Romania, and presented a paper entitled "Moulting Hormones of the Tobacco Hornworm," at the International Conference on Regulation of Insect Development and Behavior, in Karpacz, Poland, and at the Institute of Physiological Chemistry, Philipps University, Marburg, Federal Republic of Germany.

Ronald Fayer, Chief, Ruminant Parasitic Diseases Laboratory, API, was a keynote speaker at the Canadian Veterinary Medical Association Convention at Moncton, NB, Canada, in July. He presented two 1½-hour talks: "Diagnosis of Sarcocystosis in Livestock," and "Toxoplasmosis--Public Health Significance."

Robert D. Lumsden and Jack A. Lewis, Soilborne Diseases Laboratory, PPI, recently visited with Mexican plant pathologists in Chapingo and Cardenas to discuss proposals for Mexico-U.S. cooperative activities in studies on the ecology and control of several soilborne plant pathogenic fungi of mutual importance to both countries. While at Chapingo they were guests of Dr. R. García-E., and while at Cardenas they were hosted by Mr. Gustavo-Friás-T. In both places they toured areas of agroecosystems based on traditional methods of agriculture as practiced by the Aztecs and Mayas.

James E. Baker, Postharvest Physiology Laboratory (PPL), HSI, organized the second Gordon Research Conference on Plant Senescence held July 6-11 at Holderness School, Plymouth, New Hampshire. Morris Lieberman, James Anderson, and Douglas Adams, PPL, also participated. Over 90 scientists attended, including scientists from Australia, England, France, Canada, Israel, Japan, South Africa, Switzerland, and the U.S.

William P. Eckblad is working at the Animal Parasitology Institute under a Cooperative Agreement with the University of Idaho. His work relates to the immunological response of animals to heavy tick infestation.

Kenneth L. Kuttler, Chief, Hemoparasitic Diseases Laboratory, API, attended meetings (September 8-12) of the Animal Health Directors of the Americas sponsored by the Instituto Interamericano de Ciencias Agrícolas-OEA, held in San Jose, Costa Rica. Dr. Kuttler presented a report on immunization techniques for anaplasmosis and babesiosis which included data on a recently completed trial conducted at Beltsville of a new nonviable Babesia vaccine.

COOPERATIVE RESEARCH

VARIETY RELEASE

The Field Crops Laboratory, PGGI, released a multigerm sugarbeet line, SP 8030-0. It is an open-pollinated variety having taproots that can be lifted from the ground relatively free from adhering soil. It is moderately resistant to *Cercospora* leaf spot and *Aphanomyces* blackroot, and has root yield and sugar percentage approximately equal to commercial breeding lines. The variety still has a little variation in the degree of freedom from soil adhering to the roots, but it will be quite useful as a source of genes for this characteristic. Soil-free roots do not require the mechanical cleaning that now severely damages commercial sugarbeets and results in storage pile losses. It was developed by Gerald E. Coe.

AWARDS AND RECOGNITION

Cash Awards:

Dendy, Wallace L., Light and Plant Growth Laboratory, PPHI.
Dungey, William A., Light and Plant Growth Laboratory, PPHI.
Porter, Wayne M., Chairman's Office, PGGI.
Sirk, Judith A., Insect Reproduction Laboratory, AEQI.
Spencer, Rodney, Ruminant Nutrition Laboratory, ASI.

Quality Increases:

Ewing, Robert B., Parasite Classification and Distribution Unit, API.
Flook, Barbara A., Milk Secretion and Mastitis Laboratory, ASI.
Lichtenfels, James R., Parasite Classification and Distribution Unit, API.
Pheeny, Maria C., Seed Research Laboratory, PGGI.

George F. Shaffer, Jr., has been selected to serve as Foreman of the Animal Care-takers, API. Mr. Shaffer has been with that group for 16 years, most recently serving as Assistant Foreman.

J. Ralph Lichtenfels, Head, Parasite Classification and Distribution Unit, API, was elected to serve as President of the Helminthological Society of Washington for 1980. Despite the seemingly provincial name, this is in reality an international society with about 450 members.

Susan Wells, an undergraduate student of microbiology at the University of Maryland and a 1040 student in the Cell Culture and Nitrogen Fixation Laboratory, PPHI, has been awarded an American Society for Microbiology President's Fellowship. Working under the supervision of David Kuykendall, Miss Wells is studying tryptophan auxotrophic mutants of Rhizobium japonicum, the nitrogen-fixing micro-symbiont of soybeans. The ASM President's Fellowship provides transportation and residence expenses for Miss Wells to study special techniques of biochemical analysis required for determining the activities of tryptophan biosynthetic enzymes in the laboratory of Dr. Sallie Hoch, at the Scripps Clinic and Research Foundation, La Jolla, California.

Milton S. Schechter, a consultant for the Livestock Insects Laboratory, AEQI, received the 1979 Burdick and Jackson International Award for Research in Pesticide Chemistry, on August 28, at the American Chemical Society National Meeting in Las Vegas, Nevada. Mr. Schechter worked for USDA from 1937 to 1975 as a research organic chemist in the field of pesticides and did pioneering work on the structure of pyrethrins. He synthesized allethrin, the first synthetic pyrethroid. His colorimetric method for DDT analysis is still used in the developing countries. He is an author and coauthor of over 120 publications and eight patents. This Award was established in 1969 by the Pesticide Chemistry Division of the American Chemical Society and is sponsored by Burdick and Jackson Laboratories, Inc., Muskegon, Michigan. The award is granted to an individual, without regard to nationality, for outstanding contributions to research in pesticide chemistry. Mr. Schechter is the second USDA scientist to receive this award--the first was Dr. Morton Beroza in 1976.

Bradford W. Berry, Meat Science Research Laboratory, ASI, was awarded the American Dairy Science Association-American Association of Animal Science Young Scientist Award for the Northeast section. Dr. Berry received the Award for his outstanding contributions to meat science through effective research. The Award was presented at the American Society of Animal Science meeting in Ithaca, New York, on July 29.

Theodor O. Diener, Plant Virology Laboratory, PPI, was elected to the Leopoldina, German Academy of Natural Scientists, in May. The Leopoldina is among the oldest scientific academies in the world. It was established and has existed without interruption since 1652. According to the founders' plan, the Academy comprises all natural sciences and medicines. It endeavors to promote development of science in the service of mankind beyond individual specialities and beyond national boundaries. About half of the members are from West and East Germany, Austria, and Switzerland. The other half are from most other countries in the world. In German-speaking countries, membership in the Leopoldina represents recognition equivalent to membership in the National Academy of Sciences U.S.A. for American scientists, or in the Royal Society for British scientists.

Jacobus M. Kaper, Plant Virology Laboratory, PPI, was appointed as a Corresponding Member of the Royal Netherlands Academy of Sciences, in April. The Royal Netherlands Academy of Sciences was founded in 1808. In the Netherlands, it has a function and carries a prestige roughly equivalent to that of the National Academy of Sciences U.S.A. The Academy consists of two divisions: Mathematics/Natural Sciences and Literature. Membership is circa 160 regular members, 30 corresponding members, and 40 foreign members. Members are elected and subsequent appointments are confirmed by Royal Decree. Regular membership is restricted to scientists working in the Netherlands. Corresponding Members work outside the Netherlands but should have Dutch citizenship or should have earned a doctorate at a Dutch institute of higher learning. Dr. Kaper obtained his Ph. D. at the University of Leiden.

VISITORS

Federal Republic of Germany--On August 29, Professor Manfred Tevini, Botanisches Institut der Universitat II. Lehrstuhl, (Pflanzenphysiologie), University of Karlsruhe, visited the Plant Stress Laboratory, PPHI, (Meryl N. Christiansen and Donald T. Krizek); the Plant Hormone and Regulators

Laboratory, PPHI, (W. Meudt); and the Instrumentation Research Laboratory, HSI, (Karl H. Norris). Professor Tevini's special interest was the UV-B research program conducted in the U.S. by the USDA and other agencies to assess the impact of stratospheric ozone reduction.

Mexico--Dr. H. Leal Lara and Dr. A. Lopez M. Canals of the Food Science Department, Universidad Nacional Autonoma de Mexico, visited the mushroom research facility of the Vegetable Laboratory, HSI, on July 18.

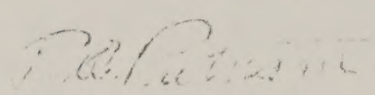
Ohio--The Vegetable Laboratory, HSI, hosted a group of 16 Extension faculty from Ohio State University on July 10. The group was on a 1-week in-service training tour of vegetable research stations in the East. The visitors included 11 County agents whose primary interests are in vegetable production. Field plot tours (potatoes) were arranged with Raymon E. Webb, Lind L. Sanford, and Stephen L. Sinden; (tomatoes) Allan K. Stoner and Thomas H. Barksdale; and (entomological research) William W. Cantelo. Scientists from other laboratories with interest in vegetable production also participated: John M. Taylor and Cecil F. Tester, Biological Waste Management and Organic Resources, AEQI; J. Rennie Stavely, Applied Plant Pathology, Jack A. Lewis and Robert Schlub, Soilborne Diseases, PPI; and John R. Teasdale, Weed Science, AEQI. During the lunchtime conference, A. A. Piringier, HSI Chairman, entertained questions relating to small farms research, budgetary restrictions on research, and relationships between State and Federal research programs.

New Zealand--Dr. Colin O. Gill, from the Meat Industry Research Institute of New Zealand, visited the Meat Science Research Laboratory, ASI, on June 30. Dr. Gill was interested in discussing advances in the microbiology of meat.

People's Republic of China--The Chinese Agricultural Education Delegation visited Beltsville on September 19. This delegation was headed by Xiug Yi, Director, Bureau of Education, Ministry of Agriculture, and included presidents and high level administrators from several agricultural colleges and institutes. They are being escorted by T. C. Tso, Chief, Tobacco Laboratory, PGGI, during their visit to the U.S. At Beltsville, Dr. Putnam described our organization and how we function. The visitors were particularly interested in the peer review system for our research scientists and how research information is transmitted to students, industry, and the public.

Scotland & Switzerland--Dr. R. Moqbel, Wellcome Laboratories for Parasitological Research, University of Glasgow (Scotland), and Dr. N. Weiss, Swiss Tropical Institute, Basel (Switzerland) recently visited the Animal Parasitology Institute.

Turkey--Dr. Vural Yigit, from the Marmara Research Institute, Istanbul, visited the Meat Science Research Laboratory, ASI, on July 7. He was interested in all aspects of meat research with particular emphasis on refrigerated meat.


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NOTES FROM THE DIRECTOR

No. 119

October 28, 1980

JERREL B. POWELL SELECTED BARC ASSISTANT DIRECTOR

Dr. Powell received his B.S. and M.S. degrees from Oklahoma State University and his Ph.D. from Washington State University. He served as a Research Geneticist conducting research on the cytogenetics of perennial and annual warm-season grasses, at Tifton, Georgia, and as Investigations Leader for the Grass and Turf Investigations from Beltsville, Maryland. More recently he has served as Technical Leader for genetic and cytogenetic investigations on forages and turfgrasses, and as Chief of the Field Crops Laboratory, Plant Genetics and Germplasm Institute, BARC.

Dr. Powell is a recognized authority on forage and turfgrasses and is a leading researcher on the effects of chemical mutagens and ionizing radiation on forage crops. He is the foremost authority on mutation breeding of vegetatively propagated grasses. He has participated as the USDA representative on several of the regional technical committees, as well as other industry and international research and advisory committees.

Dr. Powell will contribute valuable expertise to the BARC Director's Office and increase our capacity to respond to the needs of BARC research scientists, support staff, and line and staff administrators.

YOUNG ADULT CONSERVATION CORPS (YACC)

The YACC program was established by PL 95-93, August 5, 1977, to provide young adults with meaningful work experiences in the Federal Government. The Northeastern Region became a part of this program in June of 1978, and has three nonresident camps--Beltsville Agricultural Research Center; National Arboretum; and Plum Island Animal Disease Center.

The YACC program is open to all young people ages 16 through 23 who are unemployed and not attending school. This program is not limited to economically disadvantaged youth, it has no educational or vocational training component, and it pays the Federal minimum wage. The maximum length of employment is 12 months, and an enrollee may be employed up to three times to complete the 12 months of work.

BARC now has 77 enrollees on board. These enrollees are placed in various types of jobs throughout the Center. We are striving to make this a positive work experience for the enrollees.

MEETINGS AND WORKSHOPS

A series of Plant Tissue Culture Workshops, sponsored by the BARC Tissue Culture Committee, was held in the Bioscience Conference Room, BARC-West, on September 11, 18, and 25. Session moderators were: Lowell D. Owens; Gideon W. Schaeffer; and Freddi Hammerschlag, Cell Culture and Nitrogen Fixation Laboratory (CCNF), PPHI. Topics and demonstrations included in the three workshops were:

Protoplast Techniques - Jean L. Bellows, CCNF, PPHI, & Marie E. Tousignant, Plant Virology Laboratory, PPI.

Vacuole and Chloroplast Isolation from Protoplasts - James A. Saunders & Denise Bloom, Tobacco Laboratory, PGGI.

Nucleii Isolation from Protoplasts - Muhammed Aly, CCNF, PPHI.

Protoplast Infection or Transformation - Robert A. Owens, Plant Virology, PPI, & Dean E. Cress, CCNF, PPHI.

Liposome-Mediated Insertions - B. Matthews, CCNF, PPHI.

Single-Cell Cloning - Lowell D. Owens, CCNF, PPHI.

Cell Selection for Altered Phenotype - B. Matthews, Gideon Schaeffer, & Francis T. Sharpe, Jr., CCNF, PPHI.

Wheat Anther Culture - Gideon Schaeffer & John T. Dudley, CCNF, PPHI, & P. Stephen Baenziger & William P. Bullock, Field Crops Laboratory, PGGI.

Secondary Metabolite Production - A. Hall, Georgetown University.

Ovule and Embryo Culture - Toru Arisumi, Florist and Nursery Crops Laboratory, HSI.

Disease Elimination - Karen L. Pearce, CCNF, PPHI.

Micropropagation - Richard H. Zimmerman, Fruit Lab, HSI; Olivia H. Broome, Fruit Laboratory, HSI; & Freddi Hammerschlag, CCNF, PPHI.

Approximately 50-90 people attended each workshop.

SERVICES AVAILABLE FOR SOLVENT EXTRACTION

The Plant Hormone and Regulators Laboratory (PHRL), PPHI, can schedule the use of the following large-scale equipment for solvent extraction of plant or animal products:

- a) walk-in fume hoods
- b) 4-liter-size Waring blender
- c) 10-liter-capacity Soxhlet extraction apparatus
- d) 10-liter-capacity rotary evaporator
- e) 80 x 760 mm chromatographic columns
- f) large-scale glassware (separatory funnels, round bottom flasks, etc.)
- g) facilities for preparing chemicals (heating mantles, reflux condensers, etc.)

Contact Joseph G. Buta or N. B. Mandava, PHRL, Building 050, GH-4, X43061.

MATERIAL PREPARED BY J. F. WORLEY FOR COOPERATIVE PROJECTS

Over the years, Joseph F. Worley provided microscopic expertise for cooperative projects with many BARC scientists. At his death in May of this year he was actively engaged in cooperative projects with several colleagues. A large amount of material associated with these projects (e.g., prepared microscope slides, fixed plant material, and photographs) is stored in his laboratory. It would be appreciated if those who have worked with Dr. Worley look over these items to determine which should be kept. Material not picked up will have to be discarded. For more information, contact George L. Steffens, Chief, Plant Hormone and Regulators Laboratory, PPHI, Building 050, GH-4, BARC-West, X43061.

EMPLOYEE ACTIVITIES

Alley E. Watada, Horticultural Crops Quality Laboratory, HSI, has accepted an appointment as a member of the Committee on Plant Products, Commission on Sociotechnical Systems, National Research Council, Washington, DC, for a term of 3 years. This committee reviews and evaluates Plant Products Research Programs under the jurisdiction of the Advisory Board on Military Personnel Supplies.

COOPERATIVE RESEARCH

Dr. Elias K. Chacko, visiting Fellow from the Indian Institute of Horticultural Research, Bangalore, India, has been working with Donald T. Krizek, Plant Stress Laboratory, PPHI, on physiological studies on the flowering of tropical fruits including the mango and banana. He returned to India last month.

Dr. Francis M. Shao, from the Ministry of Agriculture, Kilimanjaro, Tanzania, is working with Robert K. Howell, Plant Stress Laboratory, PPHI, on the root rot complex of beans. He will be at BARC until September of 1981.

Mr. Shou-Tai Hsu, People's Republic of China, is on a 6-month research/work/study program at the Animal Parasitology Institute (API). Mr. Hsu is currently in charge of the Shanghai Laboratory of Animal Schistosomiasis. While at API, Mr. Hsu will study techniques for in vitro cultivation of helminth parasites

with Frank W. Douvres; immunological and vaccination procedures with Harry Herlich, Kenneth D. Murrell, and Frank G. Tromba; and the managerial and administrative protocols of the API.

VISITORS

VISITOR UNIT QUARTERLY TABULATION:

During the quarter ending September 30, 1980, the Visitor Unit reports the following information:

<u>No. of Visitors</u>	<u>High Level/Professional Groups/Individuals</u>	<u>Students</u>	<u>Other</u>	<u>Countries Represented</u>
3,592	826	619	2,147	46

National Cattlemen's Association (NCA) Visit

On October 14, Mr. Burton Ellers of the Legislative Office, and Mr. Robert Cook, Director, Beef Cattle Research for the NCA, visited BARC. The visit included a BARC overview and tour of the North Farm by P. A. Putnam, and stops at the animal research area to observe research on energy metabolism (Henry F. Tyrrell and Gordon L. Haaland); estrus detection (Harold W. Hawk); forage preservation (Dale R. Waldo); anaplasmosis and babesiosis (H. Herlich); and Sarcocystis (Ronald Fayer).

Legislative Staff Visit

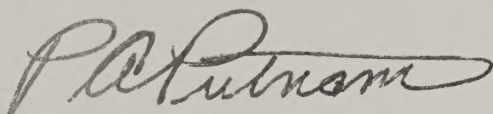
An all-day visit to BARC was made on October 9 by the Legislative Staff representatives from Iowa, and a member of the Senate Agriculture Staff. P. A. Putnam, Director, welcomed the group at 9:30 a.m., followed by a windshield tour of the North Farm by the Visitor Unit. Stops were made to view research on soybeans (Meryl L. Christiansen, Deane F. Weber, and Thomas E. Devine); forage preservation (Dale L. Waldo); beef cattle nutrition and physiology (Theron S. Rumsey); artificial insemination and estrus control in swine (Vernon G. Pursel); swine nutrition (Lowell T. Frobish); Sarcocystis (Ronald Fayer); and vaccines on anaplasmosis and babesiosis (Kenneth L. Kuttler).

On a follow-up visit, October 23, several more members of the Senate Agriculture Staff and a few staff representatives from the Senate visited the swine stops (Vernon G. Pursel and Norman C. Steele), plus research on fruit tissue culture (Richard H. Zimmerman), potato breeding (Raymon E. Webb), the World Small Grains Collection (John G. Moseman and David H. Smith, Jr.), human nutrition (W. Mertz, Director, Beltsville Human Nutrition Research Center), and small farms sheep research (G. Paul Lynch).

Australia--Dr. Paul E. Kriedemann, Chief, Division of Irrigation Research, Griffith, New South Wales, Australia, Commonwealth Scientific and Industrial Research Organization, visited with Donald T. Krizek, Plant Stress Laboratory,

PPHI, Karl H. Norris, Chief, Instrumentation Research Laboratory, HSI, Lowell E. Campbell, Chief, Agricultural Equipment Laboratory, PPHI, Landy Altman, SEA Energy Coordinator, and other scientists at BARC during the first week in October to discuss mutual research on crop response to greenhouse microclimates, including CO₂-enriched atmospheres, solar energy utilization, and nitrogen economy in row crops.

England—Dr. R. C. Ross, research manager of Country Kitchen Foods, Ltd., England's largest producer of mushrooms, visited with James P. San Antonio and Kenneth L. Deahl, Vegetable Laboratory, HSI, on September 16.

A handwritten signature in cursive script, reading "P. A. Putnam". The signature is fluid and elegant, with a long horizontal flourish extending from the end of the name.

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

